

REMARKS

This Response is submitted in response to the Non-Final Office Action mailed July 8, 2009.

Claims 10, 16, and 39 are amended. Claims 28, 32, 34-36, and 41-46 have been withdrawn. Claims 1-18, 39 and 40 are pending in the Application. Reconsideration of the pending claims is respectfully requested in view of the following remarks.

I. Summary of Office Action

Claims 1-18, 39, and 40 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,961,909 issued to Lord et al. ("Lord"), in view of U.S. Patent No. 6,563,521 issued to Perttunen ("Perttunen"), and further in view of U.S. Patent No. 6,457,017 issued to Watkins et al. ("Watkins").

II. Claims Rejected Under 35 U.S.C. § 103(a)

With respect to the Section 103(a) rejections of independent Claims 1, 10, and 39 over Lord, Perttunen, and Watkins, Applicants submit that Lord, Perttunen, and Watkins do not teach or suggest, either individually or in combination, either of the following features of Claims 1, 10, and 39: "wherein the ID numbers are assigned while the directory structure is being traversed in the DFS order" or "wherein the ID numbers correspond to [or depend on, or are chronologically assigned in numerical order based on] the DFS order in which the determined directories are traversed."

Lord discloses a system for displaying a hierarchical directory. A server maintains information describing a complete tree-structured directory, and serves selected segments, or views, of this information to clients. The maintained information includes index values associated with directories. (Lord, Abstract; 5:1-6:38.)

However, while Lord discloses index values associated with directories, Lord does not describe how or when these index values are assigned. In particular, Lord does not disclose that its index values are assigned while the directory structure is being traversed in a DFS order. Nor does Lord disclose that its index values

correspond to the DFS order in which the determined directories are traversed. Moreover, Lord's index values are not unique. For example, subsystems 1, 2, and 3 are each assigned the same index value of "0" (zero).

The Examiner believes that Lord implicitly teaches a depth first search (Non-Final Office Action, July 8, 2009, p. 4). A prior art reference only inherently discloses a claim feature if the system described in the reference *necessarily* functions in accordance with the claim feature (*In re King*, 801 F.2d 1324, 1326 (Fed. Cir. 1986)). However, Lord does not necessarily function in accordance with a depth first search. While Lord teaches a tree-structured directory (column 5, Table 1), Lord does not disclose performing any kind of search on the directory, and in particular does not disclose performing a depth first search on the directory. Lord's server simply displays a selected segment, or view, of the directory to a client. The client's view of the directory is maintained in small data strings and transferred back and forth between the server and the client. Lord offers nothing to suggest that it necessarily functions in accordance with a depth first search.

Perttunen also fails to disclose either of the following features of independent Claims 1, 10, and 39: "wherein the ID numbers are assigned while the directory structure is being traversed in the DFS order" or "wherein the ID numbers correspond to [or depend on, or are chronologically assigned in numerical order based on] the DFS order in which the determined directories are traversed."

Perttunen discloses determining a depth-first search of a tree having an optimum value associated therewith. The associated value of a depth-first search is based upon an order of considering items in the tree, and similarity values between pairs of items in the tree. (Perttunen, 1:58-64.)

However, while Perttunen describes performing a depth-first search on a tree, Perttunen does not disclose assigning unique ID numbers while the tree is being traversed in the DFS order. Nor does Perttunen disclose unique ID numbers that

correspond to the DFS order in which the tree is traversed. Perttunen simply discloses an optimum value that is associated with the tree as a whole.

Watkins also fails to disclose either of the following features of independent Claims 1, 10, and 39: "wherein the ID numbers are assigned while the directory structure is being traversed in the DFS order" or "wherein the ID numbers correspond to [or depend on, or are chronologically assigned in numerical order based on] the DFS order in which the determined directories are traversed."

Watkins discloses an information management system in which an object-oriented architecture is layered over a relational database, in order to manage folders and files from multiple file systems. Managed files are incrementally indexed and can be retrieved by a user by knowing the content of a managed file. (Watkins, Abstract.)

However, Watkins apparently does not contemplate performing a depth first search on its file system. Accordingly, Watkins cannot disclose assigning unique ID numbers while a file system is being traversed in DFS order. Nor can Watkins disclose unique ID numbers that correspond to the DFS order in which the file system is traversed.

Moreover, the Examiner has not articulated a rational apparent reason to combine the applied references to arrive at any of applicants' claims, and has thereby failed to establish a *prima facie* case of obviousness. (*KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007); see also *In re Rijckaert*, 9 F.3d 1531, 1532 (Fed. Cir. 1993).) "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal standard of obviousness." (*KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006))). The Examiner states that one of ordinary skill in the art would have been motivated to combine Lord and Perttunen "in order to determine a depth-first search of the tree having an optimum value associated therewith," "as doing so would give the added benefit of efficiently organizing information." (Non-Final Office Action, July 8, 2009, p. 6.) In addition, the Examiner

states that one of ordinary skill in the art would have been motivated to combine Lord and Perttunen with Watkins "in order to manage folders and files from a variety of file systems," "as doing so would give the added benefit of logically organizing folders and documents for presentation to the user." (Non-Final Office Action, July 8, 2009, p. 7.) However, these statements are merely recitations of the objects of individual references (Perttunen, Abstract; Watkins, Abstract), rather than an articulated reason with rational underpinnings of why it would have been obvious to one skilled in the art to combine the applied references to arrive at any of applicants' claims.

Independent Claims 1, 10, and 39 are allowable for at least the foregoing reasons, as are their dependent claims.

Claim 10, as amended, recites "writing a data structure including: ... in association with the first ID number, an indication of a relation between the first directory and the second directory." Applicants submit that Lord, Perttunen, and Watkins do not teach or suggest, either individually or in combination, this newly recited feature. For example, while Lord teaches a tree-structured directory having index values (column 5, Table 1), none of its index values are associated with an indication of a relation between a directory and another directory. Lord's index numbers are merely associated with a single directory, without indicating any relation between that directory and any other directory.

Independent Claim 10 is allowable for at least this additional and independent reason, as are its dependent claims.

Claim 39, as amended, recites "wherein the data structure is traversable based on the ID numbers to determine relationships between directories of the storage server." Applicants submit that Lord, Perttunen, and Watkins do not teach or suggest, either individually or in combination, this newly recited feature. For example, while Lord teaches a tree-structured directory having index values (column 5, Table 1), Lord apparently does not contemplate that its navigation tree is traversable based on its index values to determine relationships between directories. Nor are Lord's index

values unique. For example, subsystems 1, 2, and 3 are each assigned the same index number of "0" (zero).

Independent Claim 39 is allowable for at least this additional and independent reason.

III. Conclusion

Thus, for at least the foregoing reasons, the independent claims and all claims that depend from them are believed to be patentable over the applied art.

Please charge any deficiencies or credit any overpayments to our Deposit Account No. 50-0665, under Order No. 672728062US1 from which the undersigned is authorized to draw.

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